BIOLOGICAL EVALUATION
Ips confusus Prevention

Grand Canyon National Park
Arizona

1970

In March 1970, a spring storm deposited 1 to 2 feet of wet snow on the South Rim area of Grand Canyon National Park, Arizona. The area was surveyed on April 15, 1970, and the potential hazard from bark beetles evaluated. Breakage in pinyon pine is heavy throughout the entire area. This material could afford excellent breeding sites for Ips confusus. Ips in this material could emerge and attack and kill many aesthetically important trees. Breeding material in critical areas--along trails and roads, adjacent to buildings, etc.--should be disposed of by mid-July 1970. Infested material not disposed of by then should be treated with an ethylene dibromide in water spray.

Technical Information

Potential Causal Agent - Ips confusus (LeC.)

Host Tree - Pinyon pine, Pinus edulis Engelm.

Type of Damage - Broken limbs and fallen trees--potential beetle breeding sites for ips.

Evaluation

Method - A windshield survey was made of the area between the Eastern Entrance Station at Desert View and the Southern Entrance Station. A ground survey was made of the area along the Rim Trail between Grand Canyon Village and Yavapai Point.

Results - Many of the pinyon pines throughout the area were damaged. Large limbs had been broken from the trunks and, in some cases, entire trees shattered. Damage was especially heavy in open areas along trails and roads and around buildings. Ponderosa pine was damaged to a much lesser extent than pinyon pine.

Discussion and Recommendations

The large quantity of pinyon pine debris on the ground, as a result of the March snowbreakage, poses a severe hazard for subsequent insect damage to remaining trees. Damage is most prevalent in high-use areas such as along trails and roads and adjacent to buildings. Trees in these areas are of great aesthetic value. We recommend that the pinyon pine debris in the critical areas along trails and roads and adjacent to buildings be disposed of by chipping by mid-July 1970. Infested material remaining after this date should be sprayed with an ethylene dibromide in water solution to kill the insects therein. Prior approval for pesticide use must be obtained from the Working Group of the Federal Subcommittee on Pesticides of the President's Cabinet Committee on the Environment. Little hazard should result from insects emerging from ponderosa pine snowbreakage.

Prepared by:

Paul E. Buffam

Paul E. Buffam, Entomologist
Branch of Forest Pest Control

APPROVED BY:

F. M. Yasinski

F. M. Yasinski, Chief
Branch of Forest Pest Control

Ernest D. Hardman

Ernest D. Hardman, Acting Chief
Division of Timber Management

USDA FOREST SERVICE

PROJECT PROPOSAL

Forest Insect & Disease Control

1. REG. OF AREA: Grand Canyon | 4. STATE: Arizona

2. CAUSAL AGENT: Ips & Western Pine Beetle

3. GROUP: I & WPB | 5. CALENDAR YR.: 71 F.Y.

6. TYPE OF PROJECT (Mark one)
- [ ] NATIONAL FOREST
- [ ] S & P COOPERATIVE
- [X] OTHER FEDERAL N.P.S.

7. PROJECT NAME & LOCATION: GRCA 5-71

8. UNIT: South Rim

9. TREE SPECIES: Ponderosa Pine

10. PREVENTION OR SUPRESSION METHOD: Chipping & Hand Spraying Limited

11. PESTICIDE: Lindane

12. DOSAGE RATE: 1 part 20% Lindane to 15 parts diesel

13. EST. DUR. OF WORK: 2 months

14. TYPE OF WORK	15. UNITS OF WORK	16. UNIT COST	17. TOTAL PLANNED COST	18. FUNDS NEEDED BY PERIODS: FY 19 ___ JAN 1 – JUNE 30 A. I&DC.	FY 19 ___ JAN 1 – JUNE 30 B. NonFed.	FY 19 ___ JUL 1 – DEC. 31 C. I&DC.	FY 19 ___ JUL 1 – DEC. 31 D. NonFed.
(a) Presuppression Survey Acres							
(b) Acres to be treated							
(c) Branches & Trees to be treated			$20,000				
(d) Stumps to be treated							
(e) MBM of infested trees to be logged							
(f) Other							
(g) Sub Total →							
Direct & Service Charges (Field)	% of (i) 5%		1,000				
(i) Total Field Costs →			21,000				

(Est. of a contractor to chip material resulting from severe snow storm breakage in March 1970.)
Mr. Paul Ruffin, U.S.F.S. entomologist will be into evaluate insect problem potential April 7 & 8, 1970

Note: Photo's indicating general damage from March snowstorm.

19. Proposed by → | SIGNATURE: (SGD) Charles A. Veitl | TITLE: Superintendent | DATE:

SPACE BELOW FOR REGION & AREA OFFICE USE ONLY

20. Region or Area Indirect and Service Charges →	% of (21)					
21. Total Project Cost Estimate →						

$0,000

22. Evaluation Reports: will be sent by (date) sometime after April 10, 1970 | ATTACHED ☐ | CONTINUED PROJECT ☐ | 23. PRIORITY | 24. PROJECT NO.

25. Approved by → | SIGNATURE: Carl A. Walker | TITLE: Act. Director Southwest Region | DATE: Apr. 23, 1970

SPACE BELOW FOR W.O. USE ONLY

Approved by: INITIALS & DATE	Disapproved by: INITIALS & DATE	Deferred by: INITIALS & DATE

Financed from:	1/1 – 6/30	7/1 – 12/31	TOTAL
I & DC. W.O. Reserve			
I & DC. B. of B Cont.			
I. & DC. Supplement			
BRC			
P & M			
Total Financed			
Not Financed due to:			
Deferment			
Disapproval			

Reason for deferment or disapproval

Ecological Evaluation

Mr. Paul Buffin, U.S.F.S. Entomologist will be at Grand Canyon April 7 and 8, 1970 to evaluate the storm damage which resulted from March 1970 snowstorm. There is a tremendous amount of broken limbs and fallen trees which may create a severe insect problem.

If a project is recommended it will probably consist of chipping operations however, some lindane may be used as in the past. There is a FCPC Form #2 on file with the 1970 F.Y. proposal.

Photo's are attached indicating extent of storm damage.